CLAIMS

- 1. A CAB molecule comprising an unmodified amino acid sequence, the unmodified amino acid sequence being set forth in SEQ ID NO:2.
- 2. A CAB molecule, the CAB molecule comprising an amino acid sequence modified from the amino acid sequence set forth in SEQ ID NO:2, the modification comprising at least one of the following positions: 12, 72, 283 or 586, wherein position numbering is with respect to SEQ ID NO:2.
- 3. The CAB molecule according to Claim 2, the CAB molecule comprising modifications at positions 12 and 72.
- 4. The CAB molecule according to claim 2, the CAB molecule having the following modifications: 12, 72, 283 and 586.
- 5. The CAB molecule according to claim 2, the CAB molecule having at least one of the following modifications: A12S, R72G, K283A or S586A.
- 6. The CAB molecule according to claim 2, the CAB molecule comprising a CAB 1.11 molecule having the following modifications: A12S and R72G.
- 7. The CAB molecule according to claim 2, the CAB molecule comprising a CAB1.11i molecule having the following modifications: A12S, R72G, K283A and S586A.
- 8. A nucleic acid encoding a CAB molecule, the CAB molecule comprising an unmodified amino acid sequence, the unmodified amino acid sequence set forth in SEQ ID NO:2.
- 9. A nucleic acid encoding a CAB molecule, the CAB molecule comprising an amino acid sequence modified from the amino acid sequence set forth in SEQ ID NO:2, the modification comprising at least one of the following positions: 12, 72, 283 or 586, wherein position numbering is with respect to SEQ ID NO:2.
- 10. The nucleic acid according to claim 9, the CAB molecule comprising modifications at positions 12 and 72.
- 11. The nucleic acid according to claim 9, the CAB molecule having the following modifications: 12, 72, 283 and 586.
- 12. The nucleic acid according to claim 9, the CAB molecule having at least one of the following modifications: A12S, R72G, K283A or S586A.

- 13. The nucleic acid according to claim 9, the CAB molecule comprising a CAB 1.11 molecule having the following modifications: A12S and R72G.
- 14. The nucleic acid according to claim 9, the CAB molecule comprising a CAB1.11i molecule having the following modifications: A12S, R72G, K283A and S586A.
- 15. A method of treating a subject in need thereof, the method comprising administering to the subject a CAB molecule and a prodrug that is a substrate of the CAB molecule.
 - 16. The method according to claim 15, wherein the subject is a mammal.
 - 17. The method according to claim 15, wherein the subject is a human.
- 18. The method according to claim 15, wherein the CAB molecule comprises an unmodified amino acid sequence, the unmodified amino acid sequence being set forth in SEQ ID NO:2.
- 19. The method according to claim 15, wherein the CAB molecule comprises an amino acid sequence modified from the amino acid sequence set forth in SEQ ID NO:2, the modification comprising at least one of the following positions: 12, 72, 283 or 586, wherein position numbering is with respect to SEQ ID NO:2.
- 20. The method according to claim 15, wherein the CAB molecule comprises a CAB 1.11 molecule having the following modifications: A12S and R72G.
- 21. The method according to claim 15, wherein the CAB molecule comprises a CAB1.11i molecule having the following modifications: A12S, R72G, K283A and S586A.
- 22. The method according to claim 15, wherein the CAB molecule and the prodrug are administered at different times.
- 23. The method according to claim 22, wherein the CAB molecule is administered before the prodrug so that the time between them comprises a dosing interval.
- 24. The method according to claim 23, wherein the dosing interval is between about 1 day and about 14 days.
- 25. The method according to claim 24, wherein the dosing interval is between about 3 days and about 10 days.
- 26. The method according to claim 25, wherein the dosing interval is between about 7 days and between about 10 days.
- 27. The method according to claim 25, wherein the dosing interval is between about 3 days and about 7 days.

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- 28. The method according to claim 27, wherein the dosing interval is about 3 days.
- 29. The method according to claim 27, wherein the dosing interval is about 4 days.
- 30. The method according to claim 27, wherein the dosing interval is about 5 days.
- 31. The method according to claim 27, wherein the dosing interval is about 6 days.
- 32. The method according to claim 27, wherein the dosing interval is about 7 days.
- 33. The method according to claim 15, wherein the prodrug is a Melphalin-based prodrug.
- 34. The method according to claim 33, wherein the Melphalan-bas ed prodrug is GC-Mel.